

LIKE BUTTERFLIES IN THE JUNGLE

The quest for the new El Dorado
By Damon Tabor



HHeading upriver into the darkness, there was no way to tell where water met jungle and the only sound was the buzz of the pirogue's battered Yamaha Enduro 15. A Brazilian black-market transporter named Ju-

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nior piloted the long, flat-bottomed boat. Another man, whose job it was to watch for things that could sink us, sat in the bow, illuminated by a spotlight hooked to a car battery. Several pirogues were ahead of us, and several more behind. Each carried three or four Brazilian wildcat gold miners and was loaded to the waterline with sacks of rice, frozen

meat, engine parts, and plastic jerrycans filled with diesel.

Soon I heard the low roar of rapids, and someone on the bank signaled to us with a flashlight. We steered the pirogue into a side creek and pulled in bow-to-stern with several other boats. Headlamps flashing in the dark, *petroleiros* jumped into the murky water and began heaving the sacks of rice and



the 110-pound cans of diesel onto their backs. With small flashlights clenched in their teeth, they portaged the supplies up a steep, twisting trail into the jungle. The boat pilots then backed the now-empty pirogues into the river. Gunning the motors, they rammed the bows into the rapids while several men chest-deep in the water used ropes to help pull them through. Upriver, *petroleiros* were stacking the supplies on a small beach, to be reloaded into the boats.

These supplies had already traveled through at least fifty miles of Amazon jungle and skirted two military checkpoints. They would continue west up a shallow and barely navigable creek, only to be unloaded again at a drop-off point in the wilderness. From there, transporters on four-wheel ATVs would haul everything over miles of muddy trails to clandestine mining camps.

Last March, on the day I arrived in French Guiana, a spleen-shaped patch of sovereign French territory on the right shoulder of South America, the price of gold had closed at \$1,124 an ounce on the world market, an increase of 70 percent since 2007. Once the last refuge of gold bugs and private-currency militiamen, the metal was no longer a fringe investment and hedge against risk but a profit-generating asset. Following the crash of mortgage-backed securities and amid the ensuing global credit crisis, Wall Street firms and other speculators piled into the market. Investment demand for bullion bars and coins exploded. Central banks around the world bought gold in massive quantities. In 2009, George Soros, who had earlier declared gold an asset bubble that would eventually pop, doubled his investment in SPDR Gold Trust, the world's largest gold exchange-traded fund. According to the 2010 annual gold survey by precious-metals consultancy GFMS, for the first time in thirty years demand for gold as an investment was higher than demand for it as jewelry.

The surge had fueled gold rushes around the world. Ex-militia fighters were prospecting in the Congo. Zama Zama boys armed with AK-47s and beer-bottle grenades hijacked dormant sections of active mines in South Africa. In Brazil, at least 5,000 miners

flooded an area called Eldorado do Juma after a math teacher reportedly posted pictures online of miners scooping up thousands of dollars' worth of gold. In Peru's Madre de Dios region, the government passed an emergency decree targeting illegal mining after an estimated 10,000 miners razed seventy-seven square miles of jungle. Six thousand of the miners blocked the Pan-American Highway, and the resulting clashes with police killed six people and injured twenty-nine.

Here in French Guiana, some 15,000 wildcat miners armed with diesel engines, hydraulic equipment, guns, ATVs, and not a small supply of sugarcane liquor were hacking into the European Union's sole rain forest. Called *garimpeiros*, they had an impact that was often apocalyptic. They demolished

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trees, scarred the earth with high-pressure hoses, and spewed mercury into the rivers. Malaria was rampant among the miners, violence common.

In 2008, French president Nicolas Sarkozy decided *ça suffit*. The miners were causing increasingly grievous environmental damage, and their presence technically constituted an invasion of France. Operation Harpie, named for a species of indigenous eagle capable of plucking twenty-pound monkeys from treetops, deployed 850 gendarmes supported by an elite commando squad, as well as what seemed to me the most unfortunately named military unit in the world, Les Forces Armées en Guyane—the FAGs. “If a few diehards do not understand that Guiana is France and that France respects it, we'll make them understand. The land of Guiana will not be violated with impunity,” Sarkozy declared.

In short order, gendarmes in bullet-proof lifejackets were patrolling French Guiana's mud-brown rivers on sleek black Sea-Doos, while soldiers rappelled from helicopters on search-and-destroy missions. That year, the French

seized 140 pounds of gold and 700 pounds of mercury—a modest take, and as soon as the gendarmes departed, the *garimpeiros* returned. In 2009, Sarkozy announced that Harpie would resume for another six months. In February 2010, he issued a statement making the operation permanent.

Yet the gold-related confrontations continued. On Christmas Day 2009 in Albina, a Surinamese town bordering French Guiana, a Brazilian gold miner stabbed a local resident, prompting retaliatory riots that resulted in at least one death, multiple rapes, and the evacuation of the town's Brazilian population. Two days after I arrived in French Guiana, a flotilla of machete-wielding miners in pirogues attacked a small squad of French soldiers on the Oiapoque River, which forms the *département's* eastern border with Brazil, in retaliation for the arrest of fifteen *garimpeiros* found in possession of 617 grams of gold. The soldiers fired rubber “flash balls” and warning shots, but the miners were able to recover most of their confiscated gold, worth over \$22,000.

Despite such drama, the conflict remained obscure. What little those outside of French Guiana know about French Guiana—and most, including the French, know nothing—is that it once contained a penal colony housing an accused pimp-murderer (and later best-selling author) known as Papillon, or perhaps that it is now the site of the EU's rocket-launching spaceport. That this jungle once was believed to contain the mythical golden city of El Dorado was, to people like me, a delicious historical irony. To a Brazilian *garimpeiro* armed with a diesel engine and a high-pressure hydraulic rig, it was utterly irrelevant.

At midday, we hauled up onto a sandy beach well short of our agreed-on destination. Word of our arrival had preceded us, the pilot said, and it was too dangerous for him to be seen dropping us off. With vague directions I shouldered my pack and hiked into the jungle with my translator and a photographer. We soon found ourselves crossing streams whose waters ran milky brown—an indication of ille-

gal mining. Upstream, *garimpeiros* with hoses were spraying the ground, blasting orange silt into the water. A mile farther on, we stumbled into Corotel, a small village hacked out of the jungle. Piles of garbage and *carbets*—huts built out of tree limbs and tarps—lined the trail. Several Brazilian men resting in hammocks eyed us intently. Ahead were two small cantinas, and we dropped our bags at the first and sat down at a rough-hewn table.

The cantina's owner was Ana Maria, a gnomishly short woman with curly, gray-streaked hair. She had arrived a few months earlier from the northern Brazilian state of Pará, where she had sold beer on the street for a few hundred *reais* a month. She had come to the jungle, she said, because she had heard it was easy to make money. Her cantina had a dirt floor and a meager selection of batteries, soap, and lighters. In the back was a cooking area and a green parrot named Frederico.

We were hungry and Ana Maria fixed us plates of rice and beans with chicken. As we ate, her husband, Francisco, told us that the gendarmes had raided this site the week before. They had thrown what they could in garbage bags and fled into the forest while the police burned everything. The entire camp was rebuilt within three days. "We are sons of God," Francisco said. "The land belongs to everyone."

A delicate-featured, soft-spoken *petroleiro* was also sitting at our table. "It's easier to make money here," he said. "But life is difficult." His job was to carry hundred-pound loads to the nearest mines, about five hours away. This was the hardest and lowliest of *garimpeiro* jobs. For each trip, he was paid four grams of gold, worth a little over \$100. In Macapá, his home city, he earned \$300 a month driving a motorcycle taxi.

At the edge of the camp was a cabaret with five tiny rooms for the prostitutes. Across from the cabaret, a barrel-chested man with bloodshot eyes, clutching a bottle of cachaça, waved me over. He said he'd heard that the Brazilian Army was looking for me, though no one knew why. My translator had also been told that gen-

darmes were patrolling near Ilha Bela, a series of islands in the Oiapoque. As a result, the miners had shut down all river traffic. My new friend passed the bottle to me. I drank and passed it back. A four-wheel ATV barreled down the trail, its driver staring hard at me as he passed.

That night, we strung hammocks in a *carbet* next to Ana Maria's cantina. When it became clear we intended to stay, a young *garimpeiro* packed his hammock, shouldered a rifle, and trudged into the dark. It began to rain steadily, turning the footpath to soup. At the cantina next door, a generator, satellite dish, and television—hidden in the forest during the day—materialized, bathing a sizable portion of the population of Corotel in the flickering light of

THE MAN, CLUTCHING A BOTTLE OF CACHAÇA, SAID HE'D HEARD THAT THE BRAZILIAN ARMY WAS LOOKING FOR ME

Tempos Modernos, a melodramatic and much-loved Brazilian telenovela.

In the morning, my translator negotiated with the intermediaries of the local mine owners, none of whom wanted to reveal the location of their operations. "There are many, many machines," the owner of Corotel's other cantina, Dona Glausa, told me. "But they are quiet because of you." She was a sharp-eyed woman who kept her gold in a pouch strapped to her leg, and I watched her tap a few grams onto a digital scale. It was the first gold I had seen since journeying upriver; it looked as dull and lusterless as iron filings.

Every jungle camp had at least one CB radio, which the *garimpeiros* used to call in supplies, exchange news, report gendarme raids, and, we soon discovered, to track the movements of nosy strangers. As we traveled through a given area, the miners would shut down operations, only to start them again when we left. Dona Glausa, who spent much time on her cantina's radio, warned me that the bosses of Corotel's gold mines didn't want us here. Word

had come down that anyone helping us should seek protection once we left.

We decided to set out on our own. The jungle was brutally hot. Pits of viscous mud sucked at our boots. Thick mats of tangled vines choked the trail. In places, chained ATV tires had worn the trail down to water-filled ruts. I watched for snakes, especially the lethal *fer-de-lance*. It began to rain. I was reminded of a line I'd read in a survivor's diary of an ill-fated expedition to El Dorado: "After boiling our boots in herbs we set out for the kingdom of gold." A *petroleiro* wearing a blue shirt and gold chain appeared on the trail behind us. He had been sent by Dona Glausa and Corotel's bosses, who had decided they were uncomfortable with the prospect of our dying in the jungle (though it was equally possible they didn't want the attention of a search-and-rescue operation).

He guided us through the forest to a small camp, where the translator introduced us to Don Gouarn, a short Brazilian with graying hair who said he had learned about us from the radio network. After much consideration, he had decided we could be trusted—at least partly. He would show us his gold mine, but only once he'd sent his two workers into hiding.

Don Gouarn operated a *barranco*, a modest mining venture run by a small team of *garimpeiros*. They had cut down a few acres of trees and gouged two swimming pool-size craters into the earth. Two long orange hoses snaked from a Brazilian-made Agrale pump, which Don Gouarn had purchased with about 700 grams of gold. One hose would be used to sluice the first pit's walls, while the other sucked up the sediment and pumped it into the other pit. From there, the sediment was diverted into a *caixão*, a wooden container resembling a coffin, where gold flakes would pass through a mercury-filled filtration box inside, and then end up in the cotton cloth lining the bottom of the larger container. Don Gouarn claimed not to use mercury, which if true—and I doubted it was—put him in the extreme minority.

Mercury binds quickly to gold, taking minutes and producing reliable results; manual methods like gold panning take hours and may fail to cap-



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ture any gold. For a *garimpeiro*, not using mercury was the same as not making money.

At some point, either in the jungle or at gold-buying shops, the mercury is burned off the amalgamated gold, where it enters the air in gaseous form. Even a thimbleful of mercury burned from a nugget in French Guiana can travel through the troposphere and disperse thousands of miles away. Once it settles in a lake or river, it often transforms into the highly toxic methylmercury, which builds up at higher concentrations as it moves up the aquatic food chain (fetal exposure can cause mental retardation, blindness, seizures, and microcephaly). In the region around French Guiana, *garimpeiros* release approximately fifty tons of mercury into the environment each year. Globally, "informal" or illegal mining, which produces about 20 percent of the world's gold, is responsible for releasing an average of 1,400 tons of mercury into the environment each year—more than any other source except coal burning. Once it exits the food chain and is redeposited elsewhere it can eventually return to the atmosphere, and continue traveling ever farther from the original source in a series of similar hops, a phenomenon called the grasshopper effect. Like the risks in a mortgage-backed security, it diffuses but never really disappears.

Don Gouarn squatted by a pit and swirled water and sediment around a gold pan. From this mine, he said, he extracted around 100 grams of gold each month. *Garimpeiros* sell their gold for a few dollars under world market prices, which meant he earned about \$2,800 per month. He kept 70 percent for himself and divided the other 30 percent between his two workers. Almost all of his cut was used to buy more fuel and food to keep the mine operating. He also told me his *barranco's* monthly output had decreased from about 300 grams to the current 100 grams over the past few years. A drop of that size would be a devastating setback in most businesses, but with gold prices so high it presented no problem.

We left the *barranco* and walked to Don Gouarn's *carbet*. It had a small sleeping area, a cooking grill, and a

hand-dug well. A gold scale sat on a wooden shelf. It was comfortable by *garimpeiro* standards, but Don Gouarn said that he was saving to build a small house in Maranhão, one of Brazil's poorest and most remote states. It was not clear whether even this modest goal was realistic, though: Don Gouarn was fifty-two years old and had already been a miner in the Amazon for more than two decades. The *garimpeiros* have a saying: "It is easier for a man to turn miner than become man again."

Either way, there was a darkly elegant symmetry to Don Gouarn's dream: Greed and imprudence had caused America's housing bubble, which had burst, which had roiled financial markets, which had caused fearful investors and greedy speculators to plow money into gold, which had driven up gold prices, which had fueled an Amazon gold rush, which would now—perhaps—help a poor, illiterate, middle-aged man buy his first home. Meanwhile, Don Gouarn would likely release mercury into the water and air, some of which would later travel thousands of miles and conceivably poison the same people who had set these events in motion. His gold could also end up on the world market and once there be traded by an American homeowner who, seeking redemption from past economic sins, noted that gold exchange-traded funds had been performing quite well lately—a long, golden chain of cause and effect.

As we left the small camp, a convoy of six supply-laden Kawasaki ATVs raced down the trail. Our presence had been holding them up, and the mines needed to be resupplied. It began to rain again. Later that night, we stumbled back into Corotel filthy and exhausted. At the cabaret, which had a generator-powered stereo and flat-screen television, we drank \$120 worth of beer with a twenty-five-year-old prostitute named Rose. She had glittering black eyes, a hummingbird tattoo on her neck, four children, and for sex with a miner in one of the back rooms she earned six grams of gold.

There is generally one place *garimpeiros* working the eastern half of French Guiana can sell their trea-

sure: the dusty Brazilian border town of Oiapoque, which sits directly across the river from Saint-Georges, its counterpart on the French side. There are no mines anywhere nearby in Brazil, yet many of the town's stores sell motors, hoses, and gold pans, and the town's main street is lined with about a dozen *compras de ouro*, gold-buying shops.

At Carol DTVM, the first shop I visited, a Brazilian clerk with designer sunglasses and a patina of fashionable stubble reluctantly agreed to speak with me. The front room contained a black leather couch and a one-way mirror. An oil painting of a mining camp hung on one wall and a certificate from the Banco Central do Brasil on another, which meant the Brazilian government granted the shop authority to buy and sell gold. The clerk disappeared into the back to confer with his boss. When he emerged, he declared that the shop did not deal in illegal gold. We only change money, he said. Most of the *compras de ouro* also exchanged currency, so this was likely half-true.

At Ouro Fino, the shopkeeper explained that she was not authorized to speak about business while her boss was out of town. A few doors down at Ouro Ouro, the manager said her employer, too, was out of town. Next, I went to Gold Minas, where I saw a large black machine for burning mercury from amalgamated gold. The manager explained that his boss was out of town and so he could not talk with me. Behind him, an older, well-dressed fellow appeared through a door in the back and then quickly retreated. At Lyon Gold, a pretty Brazilian woman with shrewd eyes claimed that she only worked with legal miners. A sign on the wall announced that Jesus administered her business.

Finally, Duda, the owner of the sixth shop I tried, agreed to speak with me. There were, he said, two kinds of gold-buying shops in Oiapoque: those certified by Brazil's central bank to buy and sell gold, and those that were not. *Garimpeiros* typically borrowed money from non-certified shops and paid them back with illicit gold from French Guiana. These shops then sold the gold to

certified operations, which would then declare the metal to the Receita Federal do Brasil (Brazil's IRS) and pay a tax. With the imprimatur of the state, the gold underwent a bureaucratic alchemy, transforming into a legal commodity. It could be made into jewelry or melted into ingots, deposited in a bank or traded on the international market.

Across the river in Saint-Georges, pylons rose from the shallows—the beginnings of a bridge connecting Saint-Georges to Oiapoque. Once completed the bridge will, in a manner of speaking, be the first direct link between South America and Europe. Both Sarkozy and Brazil's then president, Luiz Inácio Lula da Silva, had recently made grand pronouncements about the bridge spurring legitimate economic development in the region. Zipping over the water in a river taxi, I turned and looked back at Oiapoque. It was Sunday and the town was quiet. A sign above one of the gold-buying shops read: OURO FINO, SEMPRE UM BOM NEGÓCIO ("Pure gold, always a good business").

One scorching hot day in Cayenne, the capital of French Guiana, I visited the gendarmerie's headquarters to speak to Colonel François Müller, the commander overseeing Operation Harpie. Next to his desk was a large map covered with pick-and-shovel icons indicating the locations of illegal gold mines across the *département*. Colonel Müller had short, salt-and-pepper hair and wore stylish rectangular glasses. He was cordial, smart enough not to answer questions directly, and sympathetic to his enemy.

"*Garimpeiros* are very poor, and they come here to earn money," he said. "It's a survival situation. But it's like the frontier, the far West. The miners are deep in the Amazon. For us, it's difficult to find helicopters to transport the prisoners. Most of the time we destroy the materials and tell the miners they have to go back to Brazil."

The gendarmes would typically raid an illegal mine, destroy everything, and then provision the captured *garimpeiros* with food and water before setting them free in the jungle. Many, it



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was assumed, simply returned to mining. If the gendarmes caught a miner repeatedly, they escorted him to the Brazilian border and released him; or, in many cases, flew him on a commercial airline—along with two armed escorts—to a Brazilian city as far from French Guiana as possible. In 2009, the French government spent €2 million on airfare for *garimpeiros*. Only in rare cases did a miner enter the *département's* judicial system. It was a law-enforcement approach that seemed both wonderfully gentle and fantastically ridiculous, and I heard that the *garimpeiros* called it the “Caresse Guyanaise,” which was also the brand name of a popular local fruit juice.

Müller agreed to let me spend several days with gendarmes conducting operations from Régina, a small village on the Approuague River about fifty miles from the Brazilian border. I traveled by bus from Cayenne to the base, a pink and white French Colonial guarded by a dog named Rambo and a fence garlanded with razor wire. On the base's breezy, second-floor veranda were two tables with laptops into which gendarmes would enter information about passing boats, and two refrigerators kept stocked with bottled water, beer, and pâté (although the pâté had all been eaten when I arrived).

That evening, a patrol was mounted on the river, a wide, twisting brown ribbon running directly in back of the base. I jumped into a pirogue with Warrant Officer Gilles Petiot, a prim man with bushy eyebrows and a smoker's cough, and we motored out onto the water, along with three other well-armed gendarmes. The boat was an abused piece of equipment that, like its motor, had been confiscated from *garimpeiros*. After about forty-five minutes, we approached a bridge where we could see two figures standing in the gathering darkness, silhouetted against the sky. Petiot scanned the bridge with night-vision glasses, while one of the gendarmes next to me readied a Taurus shotgun. The others, armed with modified SIG SAUER 9-mms, crouched low.

“We are going to control these men,” Petiot said.

The boat skimmed over the water and jolted onto the shore. The gendarmes charged up the bank with weapons drawn, and disappeared into

the night. By the time I caught up to them, the gendarmes were laughing. The figures we'd seen were neither traffickers nor gold miners but middle-aged Brazilians taking advantage of a prime fishing location, possibly for *poisson tigre* (a local favorite that ecologists have found to be dangerously loaded with mercury). The men controlled the boat. Petiot lit a cigarette and turned to look at me over his square, steel-rimmed glasses. He wore stylish Adidas combat boots and kept his digital watch set to Paris time. “It is like cat and mouse,” he said. “The *garimpeiros* are always hiding, and we are always chasing.” He whistled and made a flying motion with his hand—spectral

Brazilian gold miners vanishing into the jungle.

The next morning I assembled for a briefing with an eight-man squad heading into the jungle to apprehend a Brazilian named Santos, a supplier of mining engines. The squad would be led by Chief Jean-Paul Rivière, a well-tanned fellow with a cinematically rakish French élan, and Warrant Officer Pascal Roulet, who resembled the actor Bob Hoskins and had trussed his well-used combat boots together with bungee cord.

“We'll catch what we can, and then we'll sort them over there,” Rivière told the team. “Usually we won't find any violent ones. On the other hand, everybody's got their jackets? And the weapons, you're good?”

The gendarmes were outfitted with bulletproof vests, SIG SAUER 9-mms, machetes, extra diesel fuel, and one red-handled sledgehammer. They also carried two heavy *pots thermiques*, or incendiary bombs, and NATO-approved combat rations. Our guide was a man named Thierry, a taciturn Amerindian bedecked in retail camouflage and wielding a shotgun of ancient provenance with a stock that looked like driftwood.

The sun was rising when we set out on the water and a veil of mist hung over the jungle canopy. Thierry twisted the throttle knob on our pirogue's motor and we sped past massive cathedral trees with trunks like a spinning dancer's skirt. The pirogue sprayed arcing plumes of water as we dodged rocks and

cut dramatic turns around river bends. We whipped past rows of metal silhouettes on the bank that were clothed in bullet-riddled T-shirts—target practice for the nearby Foreign Legion jungle-warfare school.

We docked next to a tributary creek emptying itself of sickly, orange-tinted water, and the squad marched into the jungle. Inevitably, it began to rain, and the trail grew slick with mud. An iridescent blue butterfly the size of a baby's hand flew above us over the trail. After several miles, Thierry halted at a clearing. The gendarmes moved forward cautiously but kept their guns holstered. I followed behind. *Garimpeiros* had razed several acres of trees and turned the stream into an archipelago of muddy sumps with piles of raw-looking earth next to them. Rivière and the others fanned out to search for equipment. Up ahead, my photographer stopped and pointed into the jungle. A man—short, dark-haired—was watching us through the trees. I turned to see if the gendarmes had noticed him. When I looked back, he was gone.

We circled back to search a small camp we had passed earlier. A *garimpeiro* had stretched a dirty tarp over two tree limbs, and a rice bag filled with greasy tools lay on the ground. One of the gendarmes found a gold pan hidden in the folds of a cathedral tree. After several minutes, Rivière shouted triumphantly from the forest. He had discovered a German-made Bosch motor concealed in the underbrush.

The engine was made of iron and resembled a black pot-bellied stove. Rivière brought the red-handled sledgehammer forward, hefted it in the air, and began to swing mightily. After several minutes, he had bent a lever and caused the motor to bleed a viscous pool of black oil. He pried off a metal plate from the engine's side and packed the insides with mud. From his bag, he removed what looked like a tennis-ball can with a grenade pin, stuffed it inside the motor, and pulled the pin. The incendiary bomb exploded in a jet of flame and sparks and white smoke, then sputtered out with a desultory hiss. Rivière frowned and kicked the motor. Old bomb, he said.

The squad gathered under the ragged tarp to eat lunch. They were

in high spirits. Somewhere in the jungle was a Brazilian who would soon find his machine only half-usable. Pascal repaired his boots, which had deteriorated markedly during the hike, with a piece of rubber cut from the miner's hose. I asked about the supplier Santos and Rivière laughed. He whistled, made the flying hand motion, and pointed at the jungle.

In December 2008, Sarkozy and Lula da Silva signed an accord that criminalized black-market mercury, mining in protected areas, and the trade in illicit, unprocessed gold. To date, neither France's nor Brazil's legislature has yet ratified the agreement. Potentially complicating matters, the two leaders also signed a \$12 billion weapons deal whereby France would sell Brazil fifty EC-725 Super Cougar helicopters and the technology to build four Scorpène-class diesel/electric attack submarines and one nuclear sub. During his remarks on the permanent extension of Operation Harpie, Sarkozy proudly declared that the exponential growth of illegal gold mining, as well as the attendant deforestation, had been halted. It was hard to gauge the truth of these claims, however, mostly because the French government made them hard to gauge. A reduction in forest cover is one of the best indicators of clandestine mines—*garimpeiros* cut down trees to get to the gold—but France's forest service, the Office National des Forêts, stopped releasing the results of its aerial surveys in 2006. Prior to that, ONF reported that annual deforestation rates had increased from 200 hectares in 1990 to 4,000 in 2000. By 2006, the total amount of razed forest had reached about 12,000 hectares—an area larger than Paris. ONF's director in French Guiana refused to be interviewed, but a government official told me that this number had, as of 2010, risen to about 20,000 hectares.

In 2009, Cayenne's daily paper *France-Guyane* acquired an ONF internal report that found that the pace of gold mining had shot up in the 3-million-hectare Guiana Amazonian Park, despite an increase in the deployment of gendarmes. Meanwhile,

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the *garimpeiros* were adapting. Miners were cutting trails through the jungle to skirt road checkpoints. Destroyed mines were being rebuilt in as little as twenty days. To thwart the gendarmes' aerial reconnaissance, miners were now not only digging smaller mines and scattering them over a larger area, they were leaving trees standing as cover, which made the mines harder to detect from above but no less destructive on the ground. And with not nearly enough gendarmes to police the borders, Brazilian *garimpeiros* remained able to cross, and recross, virtually at will.

In Cayenne, I asked a gendarme cartographer to show me the growth of gold mines in French Guiana. He pulled up on his computer maps of the *département* from the past several years. The mines were represented by circular icons resembling ragged bullet holes, and each year's circles were shaded a different color. If Sarkozy's statements were accurate, the number of circles would diminish or remain static. As we surveyed the maps from 2005 and 2006, they grew moderately but stayed largely concentrated along French Guiana's border with Suriname, and in tight clusters in the northeastern and central regions of the *département*. In 2007, the circles increased slightly. Then in 2008 and 2009—the first years of both Operation Harpie and the gold boom—they exploded, spreading like a wildfire across the vast green expanse of French Guiana's protected tropical forest.

A small but vocal minority of environmentalists and journalists who had studied this problem closely or spent time with *garimpeiros* thought the trend would continue. The gendarmes were no match for the desperately poor miners, the porous borders, and the real enemy—the global markets. Many also suspected that there was little interest on the Brazilian side in reinheriting many thousands of suddenly unemployed gold miners. According to the gendarmerie's own estimates, *garimpeiros* were mining about 10 tons of illicit gold each year. By the end of 2009, French forces had confiscated just 139 pounds.

On my last day in Cayenne, the gendarmes arranged for me to

ride in a blue Eurocopter AS350 nicknamed the Squirrel, which leaked rainwater and smelled like an old Volvo. Captain Hein, call sign Echo Fox, flew us at 300 feet over the jungle on a southeasterly course. He had packed a shotgun and snack bars in case we were shot down or ran out of fuel. Lieutenant Colonel Richard Caminade, a specialist in tactical crowd control who spoke loudly enough that I could hear him without the cockpit headphones, came with us.

Our destination was a large illegal mine in central French Guiana called Repentir, which was located near other mines known as Patience and Chien Mort. Repentir boasted a devastating combination of both alluvial and primary mining and was of such massive industrial scale that the gendarmes referred to it as a "plant."

Seen from above, the jungle appeared boundless. Waves of rounded green hills flowed out beneath the helicopter like bunched bedsheets, and serpentine creeks glinted through the trees. We passed over a small village with red-tin roofs and a white church with two steeples. Crosswinds kicked up, and the back end of the helicopter slipped around like a fishtailing car.

Hein swooped over a plateau and then dropped down into a small valley. We crested a hill and then the breathtaking destruction of Repentir spread out below us. Hundreds of acres of forest had been demolished. Scores of blue tarp-covered *carbets* spilled down the hillsides. Massive craters were cut into the earth, and miles of ATV tracks and sickly looking streams spidered out into the forest in all directions. *Garimpeiros* scattered into the trees as we passed, several men pausing to push a motor into a water-filled pit. As we flew back around, the impression of devastation kept growing. Hein muttered a dismayed "ooh-la-la" over and over again.

In October 2009, gendarmes backed up by FAGs and the 17th Parachute Engineer Regiment had attacked the site. Using explosives, they blew up four mines and twenty-two mine shafts and declared them all "impossible to access." Our mission seemed to suggest that this pronouncement was prema-

ture. The gendarmes were not planning to raid the site soon, Caminade said. It was a matter of priorities. There were other, bigger mines in French Guiana. Sarkozy's spear had to be wielded selectively, it seemed. But when the gendarmes did come, the *garimpeiros* would simply vanish ghost-like into the forest. The French would destroy the engines and the *carbets* and afterward they would go back to Cayenne, then home to France. The *garimpeiros* would rebuild and continue on as before.

"We get more efficient, but the gold price gets higher," Caminade said. "Everyone has an interest—the transporters, the buyers, the sellers. There are too many of them, and they make too much money doing this. We can only reduce their activities. We don't have enough men, enough money, enough equipment. In Brazil, when the army sees illegal gold miners, they just shoot them. We can't do that here. This is France."

The Squirrel's gas tank was too small to keep us aloft very long, and it was time to return to the air base in Cayenne. Hein brought the helicopter around for one last pass. I looked out the side window and a new section of the mine came into view. It was a blasted-looking expanse of barren gray dirt as large as several city blocks, ringed by craters filled with toxic water. Long hydraulic hoses twisted over the ground and a black tarp-covered *carbet* in the middle of the site sheltered a large motor. It was a space of spectacular blight and desolation, the distilled rapacious pursuit of a raw resource. It was El Dorado, and it had been found not by the Spanish or the French or British gentleman-adventurers but by an army of poor Brazilians borne on rickety pirogues, Kawasaki four-wheelers, and the distant greed of an ailing empire.

We banked northeast toward the coast. I could see a miner down below, standing off to one side of a *carbet*, staring up at the helicopter. Another man wearing a blue shirt walked across the moonscape toward the motor without bothering to look up. Gold was selling for \$1,125 an ounce that afternoon, up \$11.40 from the previous day, and the machine had to be fed. ■